

The ANTIQUE RADIO GAZETTE



OFFICIAL
PUBLICATION OF
THE ANTIQUE
RADIO CLUB
OF AMERICA

VOL. 18

SUMMER 1990

NO. 2



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It is our intention to have the Gazette published as closely as possible to the following dates:

March 31
September 30

June 30
December 30

The closing dates for receiving material of all kinds in order to have it appear in the next issue would be:

February 15
August 15

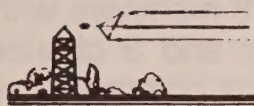
May 15
November 15

The Antique Radio Gazette is published quarterly in Madison, Connecticut

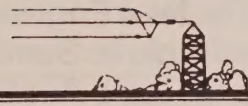
Yearly dues of \$12.00 U.S. currency are payable to ARCA January 1, of each year for members in the USA, Canada and Mexico. Overseas dues are \$14, which includes airmail postage.

The Antique Radio Club of America was incorporated in the State of Kentucky, in September, 1972. The first meeting was held at the Marriott Motor Inn, Washington D.C., on September 23, 1972. At this meeting, by-laws were read and approved and directors selected. We feel that the inception of this Club is a giant step in bringing together those individuals whose chief interest lies in the area of early radio. We invite all collectors and historians of the subject to join the club. A note to William E. Denk, Secretary, 81 Steeplechase Road, Devon, Pennsylvania 19333, will bring you an application blank by return mail.

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President's Page



We have just returned from another great convention. This one, however, was a bit unusual in that we were sitting under the spotlight as we viewed and reviewed one of radio's true pioneers.

J. Powel Crosley was one of, if not the only, man who traversed the radio spectrum from the crystal set, the one-tube Pup, and all the way to television and the transistor.

Mr. Crosley built the world's first and only 500,000 watt AM transmitter. Actually, his engineers designed, RCA built, and he manufactured nearly every conceivable consumer product. His home was outstanding.

Those of us who traveled to Cincinnati took one of the most complete steps back in time that I have ever experienced. Tim Kaiser and Tom Ducro provided the inside behind the scene experience of a lifetime. We saw the transmitter - the one and only. The 50,000 watt exciter transmitter for the 1/2 million watt is still in use today as a standby. The tower - all 750' - is still used; the staff building and the cooling pond is still there. Crosley's home and the factory are still there. WLW, the "Nation's Station", now we know why!

A big THANKS to Tom Harrison of Cincinnati Electronics, who still maintains many of the Crosley artifacts. He spent many hours working on the pictures and displays. We even displayed the "Icy Ball", a hair growing machine, and several Crosley automobiles. The tour of the first public television station, WCET, left many in awe as they viewed one of the nicest radio collections in existence. There were over

forty (40) showcases full of pre-30's equipment and much more in storage. With a little effort, Cincinnati could become the center of the radio historical preservation effort.

Many things occurred other than Crosley related, such as the election of new officers. Ed Lyon is our new Vice President; Jim and Barbara Rankin are the new Secretary team; and Ron Frisbie is the new Treasurer. I am looking forward to working with this new team in the coming year, but at the same time, there is a little emptiness in seeing our current officers retire. Bill and Jane Denk who have been the backbone of ARCA for over fifteen (15) years, my friends, my support and one of the main reasons I am your president now, will be truly missed. Without their support and encouragement, I most likely would have never served.

A big THANKS to John Terrey and Rod Phillips for their help and encouragement.

We must look into the future, and I believe you are going to see some exciting things. Effective January 1, 1991, Life Memberships will be offered - details in the next issue. Many other special changes will be occurring to help keep your club in the forefront of the collector and preservationists efforts.

We are pleased to announce that the Mid-Atlantic Antique Radio Club will host the ARCA '91 convention in Baltimore, Maryland on June 13-14-15, 1991.

Thank all of you helped make ARCA '90 in Cincinnati the convention of the "Nation's Station".

Lloyd McIntyre
President

ANTIQUE RADIO SWAP & SELL MEET AND AUCTION

The New England Antique Radio Club will hold its Summer Swap & Sell Meet and Radio Auction Saturday, July 21, 1990 at Resurrection Center, 449 Broad Street, Nashua, NH. The morning Swap & Sell Meet will include over 75 tables offering hundreds of antique and collectible radios and TV's for sale or trade, as well as two radio contests featuring Cone Speakers and RCA Radiolas, and a 50/50 raffle. The afternoon auction will offer a wide variety of old radios, TV's and related items up for bid. Members and non-members alike are invited to attend and enjoy a day of radio fun and nostalgia.

Swap Meet hours are 8 a.m. to 11 a.m. Early buyer admission is \$5.00 from 8 a.m. to 9 a.m. and general admission is \$1.00 from 9 a.m. to 11 a.m. There is no charge for the afternoon auction which begins at 12 noon. (Preview begins at 11 a.m.)

To reach Resurrection Center, take Rt. 3, Exit 6: TRAVELING NORTH: Turn left at the light onto Rt. 130 and travel 1½ miles west. TRAVELING SOUTH: Turn right at the light onto Rt 130 and travel 1½ miles west. Watch for the NEARC Swap Meet/Auction signs on your right.

For more information about the Swap Meet or membership in the New England Antique Radio Club, call or write: NEARC, RR1, Box 36, Bradford, NH 03221. (603) 938-5051.

RADIOFEST 1990

August 9, 10 and 11th at the Holiday Inn, 345 River Road, Elgin, IL 60123. Call (708) 695-5000 for reservations. Large General Auction, Contest, Special Exhibit, Ralph Muchow's Museum, Presentations, Hospitality Room, Awards Banquet, Flea Market and more. For info contact Dave Johnson, Antique Radio Club of Illinois, 2336 S. Kenilworth, Berwyn, IL 60402. (708) 484-2743.

ARCO

Founded in 1989, the Antique Radio Club of OHIO has 23 members with 20 regular members and 3 charter members. The club is comprised of men and women whose common interest is the historical preservation and restoration of all types of electrical, electronic, and wireless memorabilia. ARCO publishes a quarterly newsletter -THE ARCO CODE- for all members. The CODE contains meeting news, articles and ads which are free to members.

Active membership is open to anyone who is interested in the club activities. The club holds its meetings on the third Tuesday of each month at the First National Bank basement located on the corner of Rt. 48 and Stroop Road in Kettering, Ohio that is a southern suburb of Dayton, Ohio.

The club is holding a Show and Meet at the Holiday Inn South, located off Interstate 75 exit 50 on September 23, 1990. Please send a LSASE for more information. Thank You. Ray Koogle, Pres., 2929 Hazelwood Ave., Dayton, OH 45419 (513) 294-8960 eves.

LETTERS

Dear Mr. Drake,

I regret to say I will not be able to supply my usual two pages of material for the Summer issue of the Gazette. On April 19, as I was about half through my rough draft of my material, I suffered a lower-back injury. I have spent most of the time since then on my back on a hard surface. My records, and my word-processor are in my basement shop space, and I am not able to walk down or up the steps.

My physician tells me I should be normal again in about three more weeks. My wife says I should pay more attention to the fact I am eighty years old, perhaps she is right but I can't imagine sitting around doing nothing.

Will try to make the next issue.
Yours very truly, Bill Hoy.

Committee For The Formation of a National Archival Museum of the History of Electrical Communications

May 25, 1990

Lloyd McIntyre
4202 Thorn Apple Lane
Charleston, WV 25313

William Denk
81 Steeplechase Road
Devon, PA 19333

Gentlemen:

This is one of those letters which I do not like to write. It now is necessary for me to inform you that the ribbon cutting Ceremony of the U/C Archival Museum can not take place on the June 16-17 week end. I had hoped that this could be done in conjunction with an honor students program which is set for Saturday evening, June the 2nd.

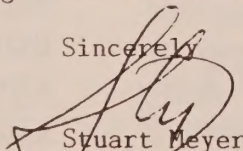
Bill Finch, the originating driving force behind this project can not be at both functions and after some deliberation we decided to have a mini ribbon cutting celebration on the afternoon of the 2nd of June (Saturday). Bill is 93 now and has recently lost his wife which has taken quite a toll on him. We decided to go the mini ceremony route while Bill is able to be in Cincinnati and go for a more formal ceremony when we add the next major segment to the museum. The June 2nd Ceremony will highlight Facsimile in honor of Bill Finch and I am talking to several other organizations about getting in to radio as the next major activity.

The June 2nd date is too far in advance* for most of your attendees to be with us on the occasion of the FAX activity. If you do have anyone who would like to attend, please let me know so that they can be formally invited to the event.

As I am now a member of The Antique Radio Club of America, I will be following your organization with interest with the hopes of attending one or more of your annual meetings. I noticed that the last issue of the "Gazette" did carry a few lines stating that the ceremony would be included in your program if arrangements could be worked out. This statement may take a little bit of the sting out of the "change in program" announcement.

I will keep in touch with both of you and I apologize for having to give you the above news this late in time but I was hoping that there was some way the timing could be worked out with Bill Finch.

Sincerely



Stuart Meyer

* ie, with respect to your June 15-16 meeting
copy: Dr. H. Thurman Henderson



University of Cincinnati

Mr. Drake,

I thought someone might be interested in some radio "bargains" I've run across. The local flea markets in KC have been great. I found several nice wood Zenith, Hoffman & RCA (35X) sets. Also a nice deco Westinghouse portable and some clean plastic Motorola & Zenith sets there. Prices paid were \$5 to \$20 each. Another way I obtained two radios was to offer to repair nine sets. Instead of getting paid for my time, I got paid by getting a small Sentinel Cathedral and a nice horizontal wood Detrola. The lady that had the sets was an antique dealer who couldn't find anyone to repair them and she was then able to sell them and make a profit. Some of the collectors who are also technicians might consider this. You get enjoyable work repairing the sets plus additions to your collection.

Best Regards, Mark A. Behrens

POST SCRIPT

Members who recall the Book Review appearing in the Winter 1989 Gazette, reporting on the recent publication of "QTC - A Seagoing Radio Officer's Scrapbook", may be interested to know that the author, Ray Redwood, KA5HCX, of Austin, Texas, has just joined our Club. Ray sent me an impressive compilation of laudatory comments he has received from readers, and glowing reviews from other publications.

Bill Denk.

THE FIRST BROADCAST ?

Who first "broadcast" over wireless? There seem to be endless claims and stories. So here is another one. In the Technical Museum in Vienna there is an experimental transmitter used by a Dr. Nussbaumer on June 15, 1904, in Graz, to transmit his own voice over a short distance. Nussbaumer was an obscure professor at the University of Graz. His name does not appear in

any of the standard reference works of science. His laboratory notes recording the event, properly witnessed by the head of the Physics Department, have just recently been found. Without support from the University, he was forced to abandon his work. The Professor lived until 1930, probably long enough to recognize the opportunity he lost, and long enough to know he had been forgotten.

IMPORTANT NOTICE

Official "Harry Houck Award" Rules

With the death late last year of Honorary Member Harry Houck, we are reminded again of Harry's generous gift that provides the foundation for ARCA's Annual "Harry Houck Award". ARCA's Agreement with Harry was entered into on February 29, 1988. That Agreement establishes the conditions under which the gift was made. For the June 1990 Convention at Cincinnati, the award, as stated in the Convention Program, is to be presented for "the best display of Superheterodyne Receivers, both battery and AC powered. Documentation is very important for this award". However, now that your Officers have had opportunity to consider more carefully the future course of these awards, it is the Club's intention to adhere more precisely to both the language and spirit of the ARCA/Houck Agreement. Under the terms of that Agreement, the Award is to be made annually to that ARCA member

1) "who contributes most in the preservation of historical radio artifacts especially in the field of superheterodynes and in the related fields of early developments."

The Agreement also specifies that an essential further basis of the Award shall be

2) "The publication of articles relating to the restoration - preservation -

exhibits - etc., and the evaluation of historical developments.”

Referring to the above-quoted *publication* requirement, the undersigned recalls that, in discussions preceding execution of the Agreement, a major objective of the contemplated Award was to encourage ARCA members to submit interesting, original articles for publication in the GAZETTE.

As your Secretary interprets these Rules, although an exhibit of relevant receivers at an ARCA Meet is not ruled out, a winning member might qualify merely by publishing in the GAZETTE an article dealing with Superheterodyne receivers, their development or preservation - see the language quoted at (1) above. Such publication provides the necessary compliance with the language quoted at (2) above.

ARCA Director, Mel Comer, worked closely with Harry Houck's nephew, ARCA Member Gilbert Houck, in drafting the Rules as they now appear in the Agreement. Therefore, it is significant that Mel interprets the language “especially in the field of superheterodynes” as meaning “especially **but not necessarily** in the field of superheterodynes”. Clearly, the rules are subject to interpretation. In the final analysis the Award judges will have to be the final interpreters of the Rules.

William E. Denk
Secretary/Treasurer

OUR NEWEST MEMBERS

Charles R. Strausser, Bethlehem, PA
Randall Herkness, Garden City, MI
Richard Terrell, Brookline, MA
David R. McClellan, Atlanta, GA
Raymond G. Peterson, Fennimore, WI
William F. Caster, Kansas City, MO
Byron M. Roscoe, Boston, MA
Ray Redwood, Austin, TX
John H. Walker, Jr., Olathe, KS
Demetrio Saltana, Palmer, PR
Frederick A. Kirsten, Lafayette, CA

Joseph V. Musadia, Jr. c/o American
Embassy, Washington, DC
Stuart Meyer, Vienna, VA
Benjamin V. Mast, Washington, DC
Larry Kalata, Lynn Haven, FL
Charles A. Hill, Buhl, ID
Robert Schrantz, West Covina, CA
Mark K. Tarby, Woodbridge, NJ
James T. Herron, Newport News, VA
Joseph C. Burke, Weehawken, NJ
David Rutland, Philomath, OR
Louis Handler, Los Angeles, CA
Daniel J. Biemer, Mt. Prospect, IL
Douglas B. Edwards, Thousand Oaks, CA
David Gilbert, Middletown, IN
Charles Martinez, Cayey, PR
Gary E. Moore, Evansville, IN
Leonard F. Chung, Honolulu, HI
Stephen Auyer, Liverpool, NY
John J. Wyse, S. Boston, MA
Gary Clayton, Ontario, Canada
Carl G. Johnson, Dayton, OH
Keith Jones, Amarillo, TX
John F. Cotter, Hyde Park, MA
James F. Kilmartin, Burlington, MA
Terry Cierlik, Pontiac, MI
John F. Barrie, Arlington, MA
John E. Enger, Powell, WV
William H. Elmer, Ontario, Canada
Roger L. Anderson, Exeter, NH
Brian Gale, San Ramon, CA
Stephen Sutley, Pacifica, CA
Ivan Casteel, Friendsville, MD
Edward B. Fawcett, Carmel, CA
Robert J. Barr, Columbus, GA
George H. Campbell, Worcester, MA
William P. Newkirk, Chenoa, IL
Dr. Ivan Faroh, Barquisimeto, Venezuela
Richard F. Orluk, Revere, MA
Don Robertson, Delmar, MD
Roger Clapp, Chicopee, MA
Paul Joel Embry, Louisville, KY
Reinstate:
Nicholas Blanda, Ocean Township, NJ
Edward C. Verner, Lakewood, OH
Charles Bridgewater, Akron, OH
Gary Householder, Dunbar, WV
John O'Bannon, Paris, IL

THE REFERENCE LIBRARY

Information was received this month from Allen Douglas, Warren Falls, and Reno Ruggere, who provided the following requested references:

DeForest D7	Radio	July	1923
Radiola Regenoflex	Radio	Sept.	1924
Western Electric 4C	Radio News	April	1926
Zenith 3R	Radio News	July	1924
Popular Mechanics	Popular		
9 tube superhet	Mechanics	Nov.	1927
8 tube superhet		Oct.	1926
1926 model		Jan.	1926
Screen grid special		Feb.	1928
Perfect tone 6		Nov.	1928

(Warren Falls, 18 Conant Rd., Lynn, MA 01904 is willing to furnish the Popular Mechanics articles at five cents per page plus postage.)

National SW3	QST	Sept.	1931
	CQ	July	1971
	CQ	Feb.	1978
National SW2	CQ	Oct.	1977
National SW5	QST	Jan.	1931
	CQ	Nov.	1978
National AGS	CQ	Nov.	1975
National NC-101X	CQ	Oct.	1978
National Screen Grid 5	Citizens Radio		
	Call Book Mag.	Sept.	1928
National NC100	QST	Dec.	1936
Pilot Wasp	Ham Radio	Aug.	1980
Pilot Super Wasp	Radio Craft	July	1929
Pilot AC Super Wasp	Horn Speaker	Jan.	1929
Pilot Universal		Vol 3	
Super Wasp	Radio Design	No. 4	1934

The following requests for help in finding magazine article references have come in since the last issue:

Acmeflex Kitset Model S
American Bosch Amberola
Crawford 3 tuber
McMurdo Silver Masterpiece 3, 4, 5
Patterson PR10

There are other requests in the Winter 1989 Gazette that we haven't received information on. So, please look at that list again. Information on this program is included in that issue.

Thanks to the above men for their support.

Jim Troe

VACATION HINTS

For those of you planning vacation trips to Nova Scotia this summer, there are two museums of interest to the communications historian that should be considered when you plan your itinerary.

The Alexander Graham Bell National Park in Baddeck includes a fine museum depicting Bell's life and contributions to society. Almost everyone knows of his work on the telephone. Many do not realize how many other fields profited from his innovation, including early aviation. Admission is free. The museum opens at 9 a.m. year round, and closes at 9 p.m. July to September, and at 5 p.m. in other months.

The other museum is the Marconi National Historic Site in Glace Bay, on Timmerman Street. This museum is also operated by the Canadian Parks Service, and is their newest facility. It is open 10 a.m. to 6 p.m. daily, but only June 15 through Labor Day. This museum is located on the site where Marconi's wireless station stood, from which he sent the first message from North America to Europe, "... have honor send thru Times, inventor's first wireless trans-Atlantic message of greetings", proving the commercial viability of long range wireless communication. The museum includes scale models of the Marconi station as it looked in 1902.

HOW THE OLD TIMERS DID IT

Jim Troe

For those of you who are into building replicas of old sets, the following two letters to the editor may provide some authentic old time information. They were printed in the November 1922 issue of *Radio News*.

A "SILVER" DIAL

As many amateurs wish to construct as much of their apparatus as poss-

ible I am presenting this hint so that any beginner may, with ease, make silver dials.

Secure a sheet of stiff brass, cut it to the shape desired with whatever diameter is wished, and clean it top and bottom with steel wool until it is bright. Having drilled the shaft and supporting screw holes for the knob, make a solution of sulphuric acid and rain-water, using three parts of acid to one of water. Pour the acid into the water slowly, employing a porcelain bowl as container. Dip and wash the disc in this solution. Melt some tinfoil in a clean pan and when the foil has completely melted, dip the brass disc in it, allowing it to remain for about 15 seconds. Place it in a pan of water to cool.

The finish is made by rubbing surfaces with a small piece of clean cloth until the "silver" shines up brightly. The marking may be done with a pen and good ink, or indentations may be stamped in the brass disc before silvering. This treatment may be applied to all the brass work on the set with a resulting neatness in appearance. It would be well to give each part a heavy coat of lacquer or good varnish to prevent tarnishing.

A RUBBERIZED PANEL

A great many fans who make their own sets and cannot afford to use bakelite, may be glad to know that they may use wood with all assurance that their panels will give entire satisfaction.

Break two or three old phonograph records into small pieces, place them in a tin can and add one-half pint of denatured alcohol. Allow this to stand until dissolved, a day or two. When thoroughly dissolved apply with a brush; this will give a very glossy finish when shellacked. I have had very good results by first putting on a light coat of shellac or water-proof varnish, then adding one or two light coats of

the solution. One-fourth-inch wood is of correct thickness for most small receiving panels. It would be well to dry the material in a warm oven before applying the insulating mixture.

CLASSIC RADIO SERVICE
25 Maple Road - P.O. BOX 764
Woodacre, CA 94973
(415) 488-4596

Dear Mr. Drake,

We enjoy being a member of the Antique Radio Club of America and appreciate the articles you present in the ARC Gazette.

We here at Classic Radio came up with an idea for a customized restoration kit which provides everything for the restorer. Our customers express great satisfaction with this kit and we feel that the members of ARC as well as non-member readers of the ARC Gazette may find this kit useful. We all enjoy collecting and restoring and appreciate any hints and ideas that come along in that regard.

In keeping with your tradition and style we offer the enclosed article for your readers in hopes of further addressing the needs of your veteran collectors and restorers as well as attracting new collectors/restorers.

Yours truly, Dan Healy,
Classic Radio Service.

The Classic Radio Custom Restoration Kit

There is a resurgence of interest in antique radios and more and more of you want restore one yourself. If you've never done it before, the obvious question is . . . where to start? Many good books have been published on the subject, covering both the electrical and cosmetic aspects. We find that most people don't want to go through the time consuming process of learning about how radios work, inside and out, just to restore one set, and the fact is, it isn't necessary.

Through years of answering questions here at Classic Radio Service, we discovered that what is really needed to help you with your radio restoration project, is a one-step-at-a-time approach to complete rebuilding with instructions that pertain directly to your particular radio. A customized "do-it-yourself" kit, if you will.

We have also concluded that anyone with an ability to read and with a minimum of soldering practice can restore a radio.

Our own personal goal as collectors/restorers is to own and restore one of every make and model radio ever manufactured (good luck) and during the past thirty-five years of restoring our own private collection (now in excess of one thousand) as well as those we have restored for our customers, we have developed a system of high quality restoration. You might say we discovered what is and what is not important to make your radio play perfectly. We subsequently came upon the idea of developing a customized kit for you restorers. This kit provides restoration help at every level with the materials and information necessary to be able to restore your particular set. Having gained a reputation as authorities in the radio restoration business, we receive several telephone calls a week from people with a set they are anxious to restore themselves. Often they feel that they are unable to pull it off due to lack of, not just a schematic, but also the procurement of quality parts as well as credible help in the way of operating procedures. For these reasons, collectors are often discouraged from attempting restoration themselves.

The Classic Radio Custom Restoration Kit provides, along with the schematic, detailed instructions that direct you from one carefully explained step to the next towards a perfect

restoration; from basic cleaning all the way through alignment and tuning. The kit includes all the required replacement parts and all these parts are of the same highest mil. spec. quality that we use for our own and our customers' restorations. With a soldering iron, and a few tools, anyone can restore a radio with this kit, keeping in mind that it's always better to start small and work up.

Say, for example, you inherited an antique radio from your grandfather. It's ten tube five bander with a phonograph and you've decided to attempt your very first restoration. In the face of the complexity of a set such as this, it's understandable that a first time radio restorer could be quite overwhelmed. A good way to overcome this is to head out to your favorite flea market or secondhand store and pick yourself up a small 5 tube, AM radio for your first restoration. If you have doubts about a successful outcome, keep in mind that if you blow it, you really haven't lost anything. All you'd be out is the cost of the radio and the kit and some of your time, time well spent learning the technique of soldering. Actually you can't really blow it if you follow the instructions closely and besides having learned "how-to", you will now have the first of your very own, self restored radio collection. If on the other hand, you discover this is not you, you haven't ruined Grandpa's radio, and you can always have someone else restore it. The Classic Radio Custom Restoration Kit removes the mystery from restoration and can provide the radio enthusiast with the opportunity to experience the great satisfaction of knowing not only that you have restored your set yourself but have restored it properly with perfect results.

When you decide to purchase a Classic Radio Custom Restoration Kit there

are some basic tools that you will need to acquire on your own, all of which are available at any local electronic supply house; a soldering iron, rosin-core solder, small needle nose pliers, small diagonal wire cutters, a screwdriver and a V.O.M. (volt ohm-meter). The kit will provide everything else you will need. We are able to customize a kit for each individual radio because Classic Radio Service has complete documentation on all radios ever made. Upon receipt of the make and model number of your radio, we pull the documentation from our library, photocopy it and pass it along to the kit department. They consult the parts list and assemble your kit. The parts included in the kit will be all the proper values required for that particular set and will include items such as dial cord, light bulbs, grommets, teflon sleeving, a new power cord etc.

One problem we encountered while developing this concept was how to deal with tubes. Contrary to common misconception, bad tubes are rarely the problem with old sets but it would be a disappointment, to say the least, to go through an entire restoration and wind up with a non-working radio only because of a bad tube. The answer is to avoid this by having your tubes tested first. All radio and television repair stores have tube testers and will, either for free or a very nominal charge, test your tubes. Take the back off your radio, take out all the tubes, have them tested and if any are determined bad, simply include the numbers along with the make and model number of your radio when you order and we will include them in your customized kit. Since all radios fall into three general "level of complexity" categories, we are marketing three basic kit sizes, priced from \$75.00.

During the years we spent developing the knowledge of true and proper radio

restoration there was no Classic Radio Service to provide answers for us. Because of this we are happy to make ourselves available to kit purchasers to answer any and all questions via telephone or mail in order to insure your success with our Classic Radio Custom Restoration Kit system.

After considering it all, we feel this kit is a great idea, priced reasonably enough that you can't afford not to try it.

For more details and pricing, call or write to: Classic Radio Service, P.O. BOX 764, Woodacre, CA 94973, 415-488-4596

We know that once someone has restored their first radio, either with the help of this kit, or without it, they're going to have gotten the bug and another antique radio enthusiast will be born.

THE BALSA WOOD SPEAKER

By Larry Babcock

My first association with the balsa wood speaker began well over fifty years ago as a child playing with my Dad's no longer used 1920's radio equipment. As best as I can remember this was in the late 1930's when I would have been in my very early teens. Dad was an active radio experimenter and listener in Jamestown, NY, right from the time that KDKA first came on the air in 1920. He did a lot of experimenting and in the mid-twenties was building and selling two-tube battery sets in the Jamestown, NY area. I remember him telling me those were reflex sets. Both tubes served first as RF stages. After that the signal passed through a fixed crystal detector and then the same two tubes were used over again as audio amplifiers. I wish that I could say that I have one of these sets, but I digress.

Among Dad's pile of antique radio treasures, I remember seeing an unusual object which he told me was a

balsa wood speaker he had built. It consisted of several thin, flat pieces of balsa wood as the diaphragm, bordered by heavier pieces like a picture frame. A horseshoe magnet driver was centered on the rear side. It looked like no other speaker that I had ever seen nor have I ever seen one since. After over fifty years, my memory of the speaker is no longer crystal clear, but I do remember hooking the thing up and trying it out. I also remember that I was surprised at how well it worked compared to his other old speakers, especially since it looked so primitive next to them. His other speakers included a few horns and some of the earliest cone types. One was an RCA UZ-1325 which I still have in my collection.

I had completely forgotten all about Dad's balsa wood speaker for at least fifty years, until I recently read an article in the August, 1927 issue of "Radio Broadcast" magazine. Page 211 of the article contained a picture of Dad's speaker exactly as I remembered it! Right then I decided that I had to have one. The approach was quite simple. I decided to do just what Dad had done, and to construct a speaker from the directions in the article. In areas where the details were undefined, I tried to reconstruct details from memory.

I was almost certain that Dad had constructed his balsa wood speaker by reading this same article. After all, how many articles do you see about balsa wood speakers? There was also the fact that the speaker pictured in the article was so much as I remembered. There was also a third and, to me, even more convincing reason. I knew Dad read "Radio Broadcast", because there was published a half-page letter by my father in the July 1926 issue. (13 months earlier). I first learned of this earlier letter publication

from a fellow radio collector 3,000 miles away in California!

The Radio Broadcast article explained that a well constructed balsa wood speaker was at least as good as the best speaker known at the time (1927). This was an elliptical cone four-feet high driven by a Western Electric 540 AW driver. Balsa wood was said to be a very fine cone material because it is both rigid and light weight. These are the important parameters in loud speaker design.

The type 540 AW driver was not available separately in 1927.

It was recommended that you purchase a complete speaker unit and remove the driver for your balsa speaker! That's a strong testimony for how the laboratory staff felt about the performance of balsa wood. Incidentally, the initial speaker design came from some Western Electric engineers "playing around" with balsa cones. Development continued and the article eventually was written by the "Radio Broadcast" magazine staff. The article also stated that the Balsa Corp. had made a speaker available in a kit which included the balsa wood, hardware, driving mechanism and frame.

The fact that the authors recommended throwing away the cone portion of a perfectly good speaker has applications to radio hobbyists today. You often see a Western Electric 540 AW double cone or similar speaker with the cone absolutely shot or even completely missing. Such a speaker is very tough to restore but you should be able to purchase one in this condition for a reasonable price, and use it to build a balsa speaker. Other drivers were also used. Just about any driver with a horseshoe type magnet and with a single pin drive to the center of the cone should work. Find a cheap driver with a bad cone, buy ten or fif-

teen dollars worth of balsa from Constantines* and you have just about everything you need. You should end up with a good performing speaker that is very different from any other in your collection.

**Albert Constantine and Son, Inc.
2050 Eastchester Road
Bronx, NY 10461-2297*

CONSTRUCTION DETAILS

Recommended sizes for the balsa diaphragms were either one by two feet, two by three feet or two by four feet. The middle size was said to be the most popular and also had the best performance. (I built mine somewhat smaller to match my Dad's.) Individual slats in the diaphragm could either be firmly glued together along both edges or left slightly separated. (untouching). I was surprised that the cracks between slats apparently made no difference in the performance.

The rest of the construction is obvious from the photo except for one thing. The article made no mention as to whether the four edges of the diaphragm cone were to be firmly glued to the frame along all four sides or left unfastened. I built mine as I remembered Dad's. He had the two long edges of the diaphragm and one short edge completely isolated from the outer frame. The diaphragm was fastened to the frame only along one short edge. I did this by spot gluing the diaphragm to the frame at three points on one short side of the frame. At all other points the diaphragm was physically separated from the frame to prevent rattling. This arrangement causes the diaphragm to act as a second degree lever. It is driven from the center and fixed along only one short edge.

To verify that a diaphragm isolated from the frame on three sides was the best arrangement, I tried clamping them together at various points and concluded that indeed there was more

volume and better tone with only one short edge of the diaphragm glued to the frame.

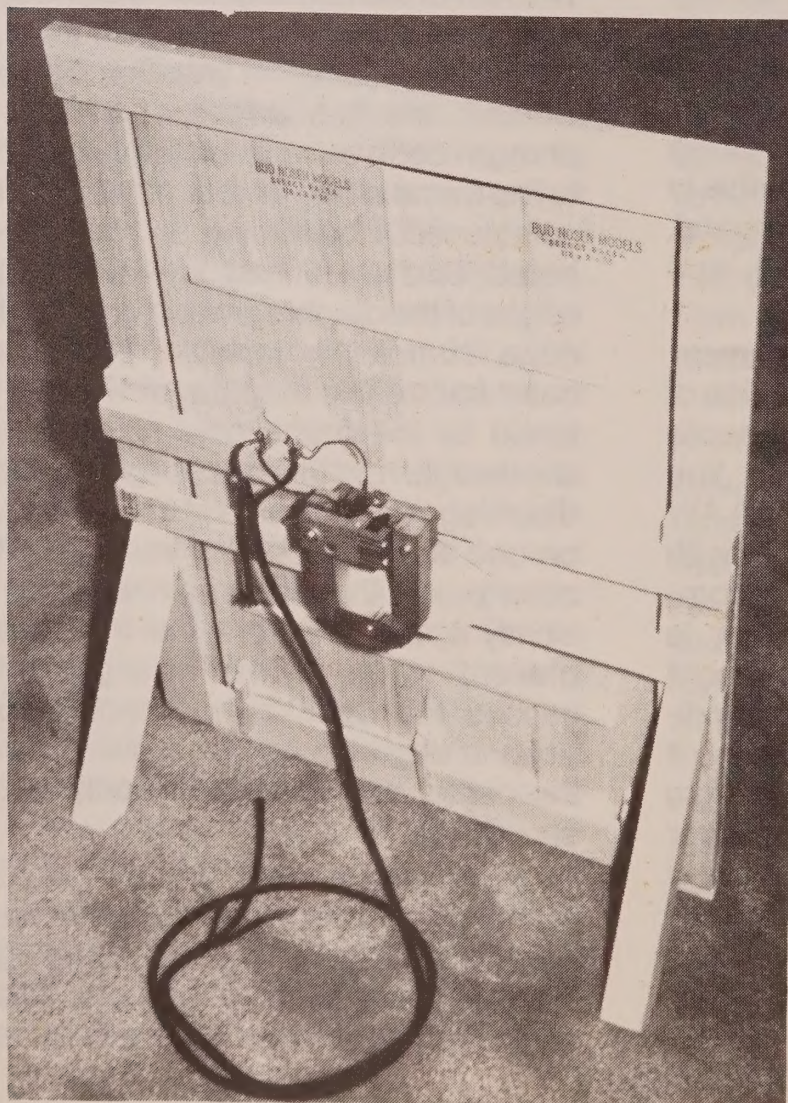
PERFORMANCE

I used a tape deck as a source of high quality music with an audio output transformer connected backwards to go from the low impedance of the tape unit to the high (1300 ohm) impedance of the balsa speaker driver. For comparison I used my Dad's RCA #UZ 1325 horn speaker. I thought that would probably be the same thing my Dad had done since he would have purchased his horn speaker several years before the balsa speaker article appeared in "Radio Broadcast". The balsa speaker sounded much better than the horn. There was a significant increase in volume, and high frequency reproduction was somewhat improved. Also there was more base, and less distortion. The horn tended to

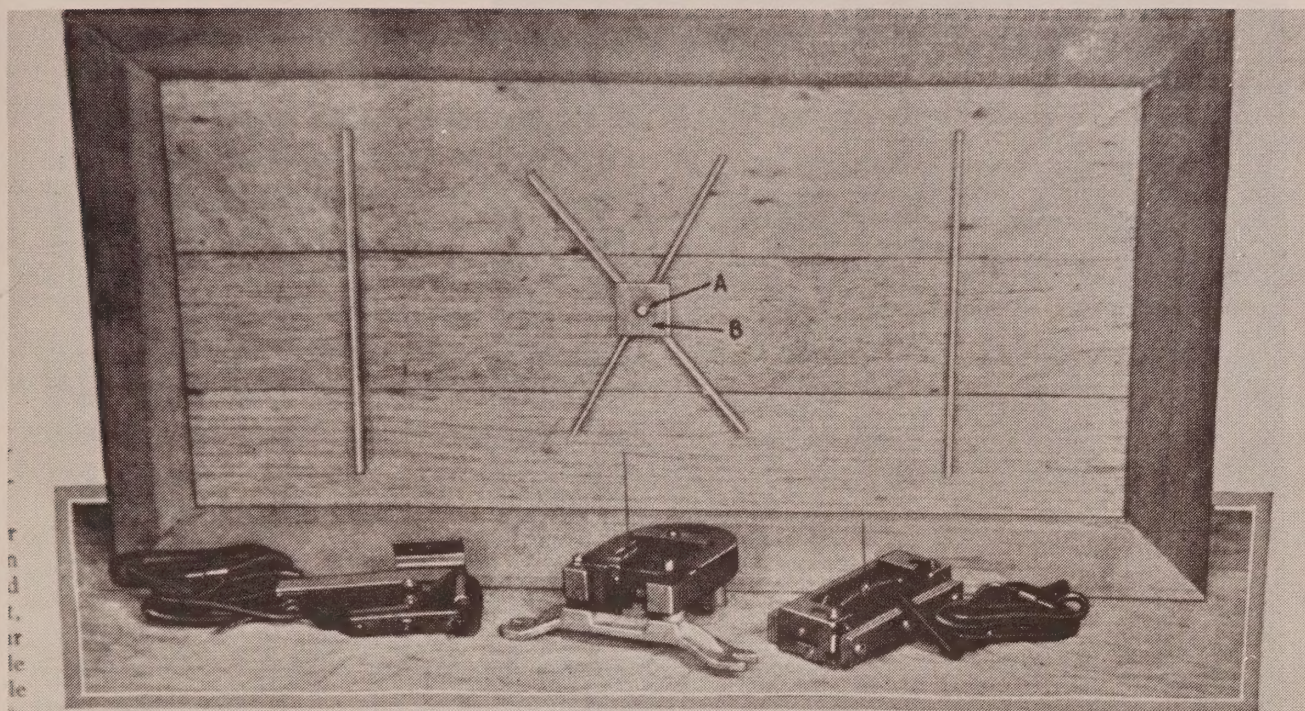
"over-respond" or ring on certain mid-frequencies whereas the balsa speaker only had a slight muffled echo or ringing. Overall I believe the balsa speaker sounded louder and clearer than the horn.

A word of caution. The quality of the sound from your balsa wood speaker can be no better than the quality of the driver you use. At first mine produced sound of low level and poor quality. Close inspection of the driver revealed rust in the gap of the driving mechanism. It was necessary to completely disassemble the driver, remove the rust and recenter the reed. Then the sound was as described above.

A final testimonial is that I gave this article to my brother, Ted to review since he is also an antique radio collector. As a result he is now starting to build his own balsa speaker.



(FIG. 1) Balsa wood speaker made recently by Larry Babcock to match one he remembers built by his father in about 1927



RADIO BROADCAST Photograph

ONE OF THE BALSA LOUD SPEAKERS CONSTRUCTED IN THE LABORATORY

With several units in front of it. The Western Electric 540 AW unit was found to give most satisfaction. "A" in the photograph is the top of the bushing arrangement which grips the pin of the driving unit. The complete bushing unit is shown in Fig. 1. "B" is a piece of cedar shingle, afterwards replaced with a piece of Balsa wood. Since the Laboratory made tests on the Balsa loud speaker, a driving unit specially designed for it has been announced by the Balsa Corporation

(FIG. 2) This balsa speaker built in 1927 by the "Radio Broadcast" magazine staff was said to be the best speaker of any type at that time.

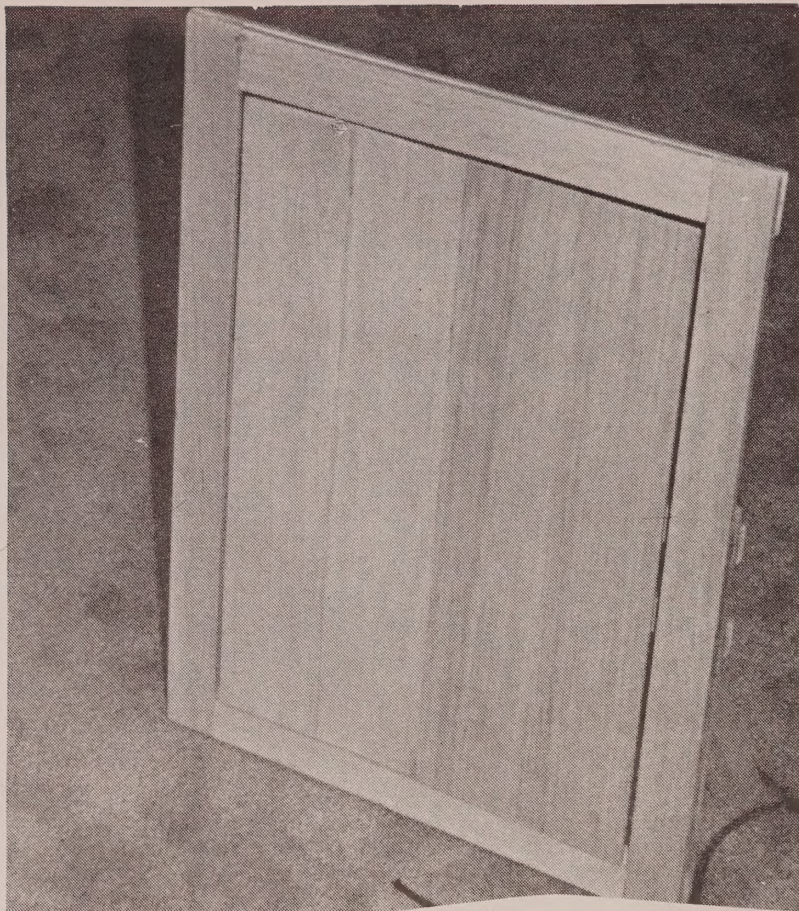
ker was very fine until a certain
which was not very high, was ex-
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who has a 540 AW loud
with the Balsa wood lou-
which is the price of ti-
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speakers

(FIG. 3) Cannibalizing a Western Electric 540 AW speaker for its mechanism.



Front View of Speaker



Adam & Eve Radio

All pictures in this article
courtesy of Larry Babcock.

THE ELECTROLYTIC DETECTOR

By Jim Troe

The first major innovation in radio detectors following the coherer were detectors based on electrolytic action. The first of these actually predated the magnetic detectors. In textbooks dated 1909 Professor R.A. Fessenden is given credit for the invention of this type of detector. In fact they were often called Fessenden Detectors. However, later texts give credit to earlier inventors, such as Pupin in 1899. The electrolytic detector was widely used in the period 1906 to 1913 and was used up to the 1920s, when it fell into total disuse due to the easier use of Perikon, silicon, carborundum and vacuum tube detectors. Until the vacuum tube became king the electrolytic detector was claimed to be the most sensitive detector, as well as the most difficult to adjust and use.

In its practical form the detector consisted of a small open glass cup in which there was placed a 20 percent solution of nitric or sulfuric acid. There was a platinum plate in the cup that provided electrical contact with the acid, and electrical connection to one side of the detector. The other electrical contact was a very fine platinum wire (0.001 to 0.00001 inch in diameter) that with careful adjustment was caused just to make contact with the acid. This wire was held in an assembly that permitted controlled contact with the acid. The detector sensitivity was very dependent on controlling the amount of contact with the acid. The smaller the wire, and the more minute the contact with the acid, the more sensitive was the detector. The platinum wire was often silver plated for strength (Wollaston wire) and then drawn to be extremely thin. In another variation the platinum wire was encased in a glass sheath, with the end ground flat to provide only a minute exposure of the platinum wire.

platinum wire. This assembly could be dipped into the acid without the careful control required with the first version. This latter version was easier to adjust, but was reported to be less sensitive.

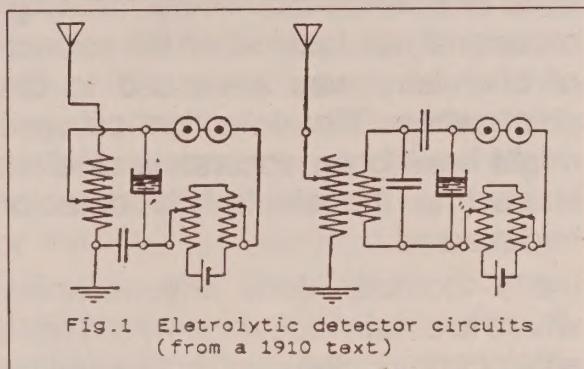


Fig.1 Electrolytic detector circuits (from a 1910 text)

The electrolytic detector required a dc bias for operation, as shown in Fig. 1. To adjust the detector to its most sensitive mode, the platinum wire was lowered to the surface of the acid by adjusting the thumbscrew (Fig. 2) until a click was heard in the headphones.

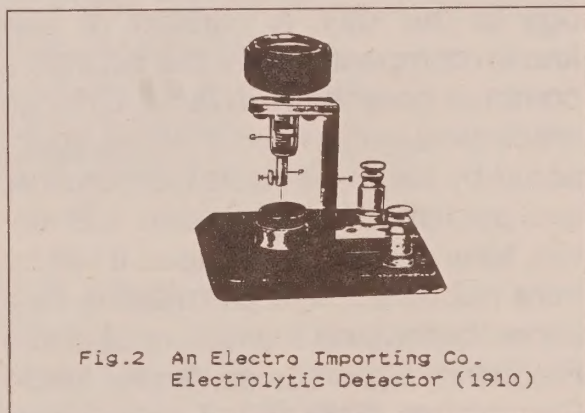


Fig.2 An Electro Importing Co. Electrolytic Detector (1910)

The thumbscrew was then turned to raise the point of the wire until a hissing sound was heard. The point was then above the surface of the acid but still in contact with it due to the capillary action of the fine wire and the acid. The potentiometer across the bias battery was then carefully adjusted until the hissing disappeared. The detector was then in its most sensitive condition for receiving signals. Due to burning of the fine point by atmospheric static, and evaporation of the acid, the detector had to be frequently adjusted.

The actual mechanism that caused detection of imposed radio frequency currents has never been fully understood. Several theories were advanced in the days of its popularity but the state of science did not permit a rigorous analysis. Later when the science of chemistry was advanced to the point where the detection process might have been accurately studied, interest in the electrolytic detector had passed.

(As a footnote, does anyone know where to obtain Wollaston wire? I have an electrolytic detector that would be interesting to experiment with.)

THE EARLY RADIO INDUSTRY OF NORTHERN NEW JERSEY

CHAPTER I

In the 1920's northern New Jersey was a center of radio development and remains a center of high technology to this day. A number of well known companies were started from a common parentage. In June 1950 an article was written by Ed Weed, sponsored by Measurements Corporation, and published in *The Citizen*, a Boonton, New Jersey newspaper. It will be here published with permission, as a series describing the history of Radio Frequency Laboratories, Aircraft Radio Corporation, Ballantine Laboratories, Ferris Instrument Company, Boonton Radio Corp., and Measurements Corporation. These companies were all internationally known. They employed over 500 skilled workers as of 1950, and were significant to the economy of the area. Remember, the reporting is as of 1950.

Radio Frequency Laboratories

The molding of vulcanized asbestos and the development of radio circuits may seem to be entirely disassociated activities, but it was in a tiny molding department of the Loando Hard Rubber Company that Boonton's world

renowned electronic industries first began. Today these companies, Radio Frequency Laboratories, Boonton Radio Corporation, Ballantine Laboratories, Measurements Corporation, Aircraft Radio Corporation and Ferris Instrument Corporation, are known wherever precision instruments are used.

For many years since the turn of the century, Richard W. Seabury had been engaged in the development of molding processes for bakelite as a licensee under the patents of Dr. Leo H. Baekeland. Mr. Seabury's concern produced a great variety of molded parts including many pieces for electrical equipment.

Business was thriving and the future looked very bright as an enterprising new industry, radio broadcasting, was sweeping the nation. There were big demands for moldings of coil forms and many of the parts that were used in early radio sets but it was soon discovered that material which was satisfactory for ordinary electrical use was a poor insulator at radio frequencies. To solve the problem and thus meet the requirement of his customers, Mr. Seabury engaged a competent radio engineer, Dr. Lewis M. Hull, who years later was to become president of Aircraft Radio Corporation.

Dr. Hull and associates, while working on various molding materials, had to devise new electronic devices for test purposes. In doing so, their creative minds brought forth circuits that were innovations to the art and the radio industry deluged them with new technical problems to solve. Thus a modest molding plant had spawned a highly technical new enterprise that in 1922 became known as Radio Frequency

Laboratories (familiarily known to radio men as RFL)

Other financial backers obtained interests in the firm, including Dr. Edward Weston, of instrument fame, the late Valentine B. Havens and Clinton P. Townsend, noted attorneys. Additional radio engineers were engaged, one of these being Stuart Ballantine who, until his death in 1944, was to make some of the most important contributions to radio that the half-century was to witness. Another capable engineer who joined this group was William D. Loughlin who held the office of president of RFL from 1930 to 1934 when he established his own company, the Boonton Radio Corporation.

RFL developments included amplifier circuits, a single-control broadcast receiver, automatic volume control and many other improvements which, after being patented, were licensed to such concerns as Stromber-Carlson, Crosley Radio Corporation, American Bosch, National Carbon Company, Kellogg Switchboard & Supply Company, Sangamo Electric Company, Grigsby-Grunow and DeForest Radio of Canada. Many readers will recall the purchase of a "Majestic" radio set, one of the popular early makes which featured the RFL single-control tuner.

Associated with Mr. Seabury, besides Hull, Ballantine and Loughlin, were other skilled radio engineers who later became prominent in the electronic industry. Two of these men, Malcolm Ferris and Harold Snow, played an important part in an enterprise that was soon to expand and develop into several different concerns, each specializing in some particular phase of the electronic art.

Most of the RFL activities were eventually absorbed by Aircraft Radio Corporation and Seabury & Sons Inc. But in 1937 RFL built a new laboratory

and hanger on the airport opposite the ARC plant and engaged in the further development and production of aircraft radio communication and navigation equipment, as well as radio-controlled, pilotless aircraft. Late in 1941 an agreement was made with Boonton Radio Corporation to manufacture RFL aircraft receivers for the Navy. During the war RFL also aided in the design and manufacture of electrical testing and proving equipment for the Weston Electrical Instrument Company and the Eclipse-Pioneer Division of Bendix. At the cessation of hostilities the firm's engineering talent turned to new commercial equipment and government developmental contracts.

AUCTION: August 9 (RadioFest 1990-ARCI) Elgin, IL. SASE for buyer/seller information.

Harry Blesy, Auctioneer
2409 Northgate
North River Side, IL 60546

FOR SALE: Best Offer
Stromberg-Carlson "Somerset" model TS-16-PM, chassis #112047 Comb. 16" TV, AM/FM 2 record players, magnificent cabinet.
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Stromberg-Carlson model 1135, comb. AM/FM/SW, phono. P.P. 6L6 output, acoutical labyrinth.
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Editor, New Jersey Bell Journal
Editor, Tel-news

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(201) 649-3815

December 20, 1989

Mr. James L. Troe
111 Skyline Drive
Morristown, NJ 07960

Dear Mr. Troe:

With this letter, New Jersey Bell grants you permission to reprint "Oberlin Smith: Father of Magnetic Recording" in the Antique Radio Club of America's Gazette. Please credit New Jersey Bell as follows:

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Please send me a copy of the issue of Gazette containing the article. Thank you for your interest in Tel-news.

Sincerely,

David J. Stakun

Edison's phonograph
made too much
scratching noise for
Smith's liking.

Oberlin Smith: Father of magnetic recording

Tape decks, floppy disks, answering machines and videocassette recorders are so much a part of everyday life today that they're almost taken for granted. They certainly play a big role in making life easier and more interesting for us. All these devices are based on the principle of magnetic recording, which was invented right here in New Jersey by a dashing mechanical genius from Bridgeton named Oberlin Smith.

Smith was also a captain of industry. In 1864, at the ripe age of 23, he founded the Ferracute Machine Company, which manufactured machine presses for cutting and forming metal. His machines stamped out everything from pots and pans to parts for Model T Fords, Winchester rifles and Kodak cameras.

Smith had a gift for design engineering that was totally natural. Of the early presidents of the American Society of Mechanical Engineers, he was the only one without a college degree. Most of his 70 patents related to his business, but some inventions — such as a

malted milk mixer and a device that automatically extracted eggs from boiling water when their pre-set cooking time expired — appealed to his own pleasure. Today, automatic garage door openers are nothing to get excited about, but guests at Lochwold, the Smith home, were stunned when they first witnessed doors that opened at the touch of a button.

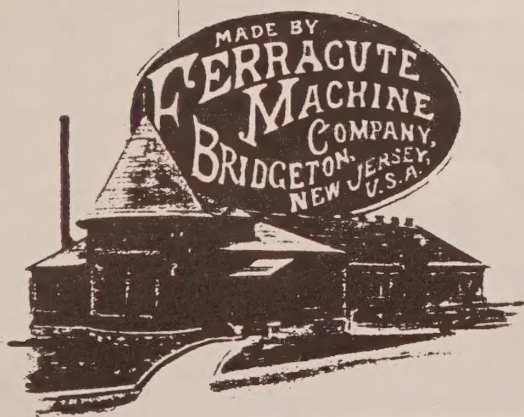
Smith was described by many as the consummate tinkerer; he never could resist trying to make something better. He was fascinated with Thomas Edison's phonograph when he saw it at the inventor's East Orange laboratory in 1877. But the invention, which he described as "a phonograph machine in which a cylinder coated with tinfoil both received and produced the remarks made to it," made too much scratching noise for his liking. So Smith took one home and began tinkering with it. In ten months, he came up with a reel-to-reel device that passed magnetized wire through an electrified coil to record sound from an Edison telephone. The age of magnetic recording was born.

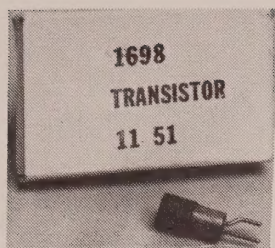
Smith filed a "caveat" — a notice of impending patent filing — for the invention with the U.S. Patent Office in October of 1878. It is likely that he planned to get a patent after he had a chance to perfect the machine, but responsibilities at Ferracute prevented him from concentrating on his research. Indeed, he was to continue his experiments for nearly 10 years without ever completing his work. Finally, he placed his

invention in the public domain for others to develop. His announcement appeared in the September 1888 issue of *Electrical World*, a trade publication read throughout the U.S. and Europe.

At the 1900 Paris Exposition, Smith and his invention were to meet again. Valdemar Poulsen, a Danish engineer, was exhibiting his Telegraphone, a battery-operated machine that recorded speech on a piece of wire coiled around a cylinder. Whether the Dane had read of Smith's announcement in *Electrical World* is unknown, but when the Bridgeton industrialist saw the Telegraphone, he knew that Poulsen had copied and developed his idea. He was proud to learn of the advanced machine, but disappointed that its creator did not give him the least amount of credit.

In 1926 at age 86, Oberlin Smith died unrecognized for his great contribution. It was only last year, when his letter to *Electrical World* was discovered, that scientists realized that he was the inventor of magnetic recording. To make sure that Smith continues to receive that recognition, Bridgeton residents are planning to preserve the Ferracute buildings — vacant since the company closed in 1968 — as a museum dedicated to the life and work of this outstanding New Jerseyan. ■





TRANSISTOR TOPICS

By ROSS SMITH

IS TESLA'S THEORY WORKING?

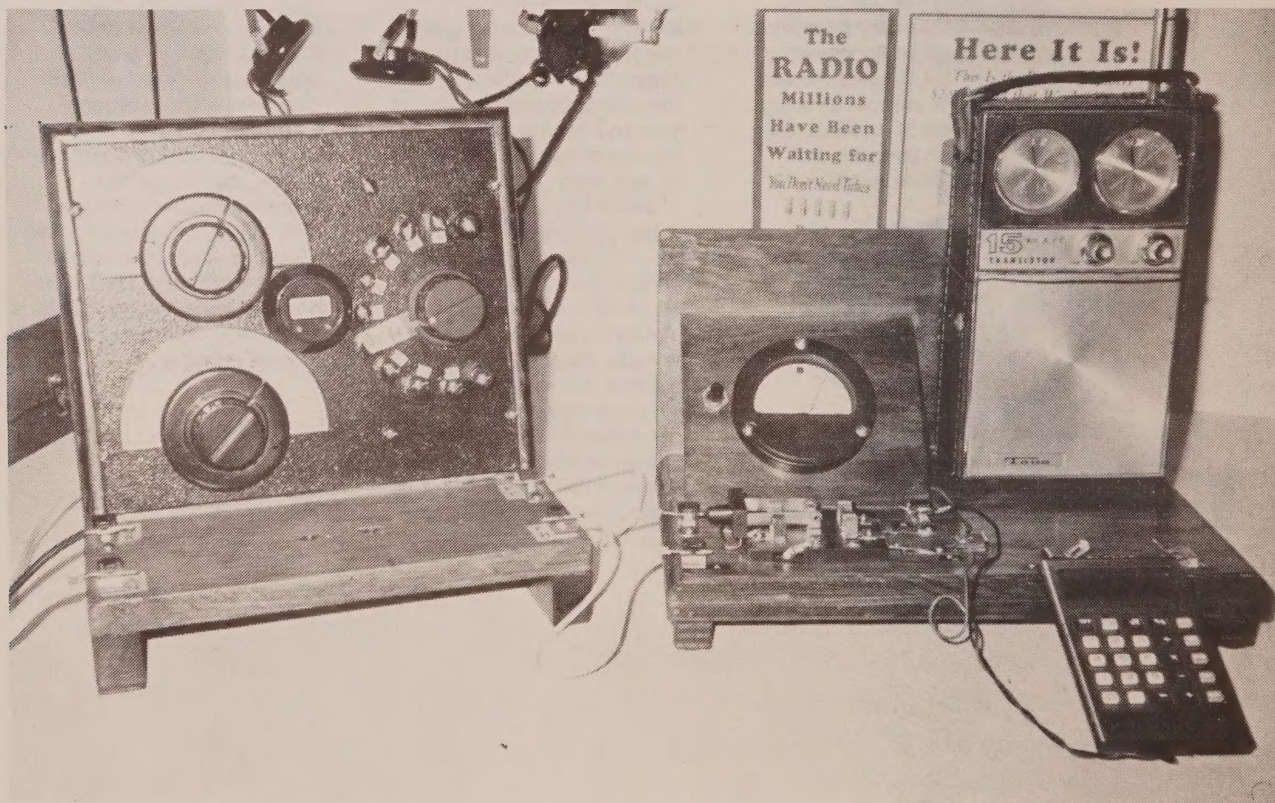
A letter from ARCA Member Richard R. Spratley of Chesapeake, Virginia reports that he is operating his Toho 15 transistor Japanese Radio, which is about 30 years old, from power generated by a long antenna driving a home brew crystal set. He reports good loud speaker volume from six stations and receives many more stations with earphones.

A knife switch selects the radio or a voltmeter so that the crystal set can be fine tuned and the cat whisker adjusted for maximum output voltage from station WJQI in Virginia Beach.

Richard also operates a pocket size calculator from the same power source. He must keep the transistor set on line in order to prevent the calculator from overloading.

His antenna consists of 50 feet of #14 solid copper wire in the attic with 50 feet of double lamp cord lead-in. We thank Mr. Spratley for his interesting letter and for the photograph of his rig.

We would appreciate receiving more letters from readers telling of your experiences with transistors and equipment. Send letters to Ross Smith, 1133 Strong Ave., Elkhart, IN 46514.



Picture courtesy of Ross Smith

MEL'S CORNER



After restoring an old antique radio, fellow restorers are often disappointed at the way the set works-and the performance that results.

Prior to World War I, the average enthusiast assembling a Wireless station, or just a receiver, was most elated to have them work at all!!

Usually, with even the best components available at that time, it was a hit or miss situation-wiring and soldering, erecting an aerial, an excellent ground - with poles above multi wires and spreaders--while below was buried copper car radiators -- pipes and everything imaginable!

The first thrill with a crystal set was to hear even the static from a long antenna-or an approaching thunder storm!It was then necessary to rush out and throw that big slate lighting switch from antenna to ground-----

What a thrill the listener had-on hearing his first spark station as it came pounding away-knowing he had to get busy and learn the Morse code signals! So now-after all the efforts this thing actually works!!

At the dawn of the 1920's, for the average radio listener as broadcast began, the big question most asked--"Who did you hear??" The advent of distance reception--DX---

The dedicated amateur radio operators were in one category while the "Listeners" were in still another. All were out to break one DX record---one right after another!

Many of these early amateurs were

located and called upon by Listeners to get their sets to work. This latter category eventually became true amateurs themselves.

Many a sleepless night occurred in the endeavor to listen to some distant station you could hardly hear. Then----talk about "braggers" telling about this set they made themselves out of parts! Or the qualities of the commercial sets then coming on stream of many makes and configurations!

Our modern radio collectors now want to fire up many of these old sets just to see what happened in the early days. How well did they perform??? What were the advantages then--also the many disadvantages?? Comparison of prime manufacturers' sets which are high in demand now--with all their knobs and dials and tap switches are most interesting to behold! The beauty of how well they were made is enhanced by the construction of polished cabinets.

No need anymore for those roof-top antennas with long wires extending for hundreds of feet-----or those fancy ground installations buried in the back yard. Gone are those aerial glass insulators that glistened in the sun!

Need a radio?? Go to your corner store and come home with a radio stuck in your shirt pocket!!

An old saying we recall-----"Nothing is ever permanent-----but CHANGE." We all change but the memories of our past stick with us to eternity.

How fortunate our radio collectors are to have those memories of how it all began- and as to the future in what's collectible?

The generations are now in a new era-with plastics and cathedrals, with interest in radio growing by leaps and bounds! The expansion of local radio clubs and organizations is beyond belief! The TV collectors who started in a small way are now in much demand as electronics continue to

expand. So-----what's next??

This old-timer has reached the zenith of radio collecting--with my trusty rotary spark transmitter--and a shelf full of loose couplers--crystal sets--tubes and especially the boxes of parts and components saved over many years!! Retirement has given me the opportunity to sort these all out--wire 'em up!--and bring back these memories of the younger days!!

I hope that ARCA members have not been too bored by my many ramblings of the past these many years, writing for the Gazette??

WHAT IS A COLLECTIBLE "RADIO"?

by Larry Wright

Having just returned from the Dayton Hamfest, I began to think about just what is a collectible today. That Hamfest contained so many goodies that I wanted to build a barn so I could take more home!

We are all familiar with the progression of radio collecting from early wireless to battery sets, to electrics, to cathedrals, to consoles, to plastics, to transistor sets, etc. Actually anything manufactured in the past is a candidate to be a collectible, particularly if it stems from the youth of the collector. So military equipment, high-fi equipment, solid state television, VCRs, compact disk players, computers, calculators, are or will be collectibles.

So if you are having difficulty finding World War I wireless equipment to collect, how about considering: the first model computer using a micro-processor, the first model Apple Computer, the first model solid state audio amplifier or tuner, the first model compact disk player, the first video recorder (commercial or consumer), the first hand held calculator, etc..... Numerical calculation is an important part of electronics development, so even the slide rule can be included in the list.

I have a Hewlett Packard "35" which I have good reason to believe was the first scientific calculator. What has happened to the early processing equipment for semiconductors? Is it too a collectible?

The development of radar in this country provides a fund of collectible ideas. Radar has over the years commanded a significant share of the military budget. The secrecy surrounding much of the development has probably contributed to less interest by collectors. There is now a radar publication, the Radarist Newsletter (9200 Bennett Ave., Evanston, IL, 60203-1702.

What about all of the equipment that has supported the development of radio and electronics? All of our treasured radios would not exist except for the test equipment that supported the development process, to make the measurements necessary to support design, and to find the bugs in the designs. Frequently the test equipment in the early days was more sophisticated than the resulting radios, was more beautiful in physical form, and represented a higher level of design skill. Companies like General Radio were there in the twenties. Such equipment was beautifully made, and worked so well that much of it is usable to this day for its intended purpose. I have a GR Capacitance Bridge from the twenties that not only still works, but is very accurate. Much of this early test equipment can not be even given away at radio flea markets. Then there is Hewlett Packard that started by building the first high quality phase shift audio oscillators in the garage of the founder. These oscillators are treated as junk in most flea markets, even though they still can be made to work well, and represent the beginnings of a world wide company

that to this day builds test equipment second to none. There is also Tektronix, an undisputed manufacturer today of the highest quality oscilloscopes. The first generation of their solid state scopes is now on the surplus market. Tube versions of their equipment are now very cheap and often very operable and useful. I recently had to pay (only) five dollars for a model 356 dual beam scope. Other even earlier, but still existent, test equipment companies include Boonton Radio, Measurements Corporation, Ferris, etc. . .

Early transistors and integrated circuits are collectible. A collection showing the evolution of device complexity and capability would be significant.

Most of us old-time collectors of radio and electronic stuff collect things that are quite simple, and primitive by today's standards. We enjoy them because they are simple. Perhaps that relates to the simplicity of our youth. With the computer generation, we will probably see a new type of collector. The things he collects will be more complex, because he grew up with the complex.

When it comes to collecting "electronics", it looks as though there should be something for any interest, and for any budget, for a long time. So, open your mind and your eyes. and Good Collecting!

WANTED: Scott transformer Co. Symphony radio (has dial escutcheon in shape of shamrock). Will purchase or trade for AK breadboard.
Jim Clark
1292 Starboard
Okemos, MI 48864
(517) 349-2249



All ads and Swap Shop items are printed in the Gazette free of charge. We do ask that you write your ad on a separate sheet of paper, type if possible, or print, and be sure to include your name and address. We reserve the right to edit all ads. ARCA is not responsible for any transactions, of course.

FOR SALE: Zenith table radios, 6-D-015 \$50, 7S 633 \$125, 5-S-327 \$175, all in excellent condition.
Rick Yerke, P.O. Box 392,
Moscow, PA 18444, (717)842-4857

WANTED: manual for a Hickok 580A tube tester also a Gilfillan GN2 neutrodyne and a Garod 5 neutrodyne

Photocopy of the inspection & warranty tags as used on Atwater Kent Model 10 receivers - (breadboards)
Mr. T. A. Drogoski
507 Coal Valley Road
Clairton, PA 15025

WANTED: Tektronix 570 curve tracer (tubes), Radiola 24 w/loop. Farm Sets 6V, 32V prefer with S.W. Bands, RF, stage (3 gang tuning) RCA 1935-37 Superhets w/ S.W. Bands. Must have 3 gang tuning cond.
Mr. & Mrs. Charles W. Rhodes
3906 Quisenberry Drive
Alexandria, VA 22309

WANTED: For Sylvania tube tester type 220, the schematic and scrolls. Also the mailing address for "Precision Apparatus Inc". Also cabinet for Philco Model 37610. Louis Takacs
3402 Orchard St.
McKeesport, PA 15132
(412) 678-3030

WANTED: Giblin audio transformers, good, open or junk. Good, bakelite base, no tip WD-11. Polleroyal "Gem of the Air" radio parts. Anything from the front panel back, including tuning caps/tuning coils, tube sockets, knobs, and schematic. Radiola 30 power unit model AP947. Reverb add on unit and/or extension speakers for a Grundig model 5490U. Photo or drawing of the knobs to a Crosley "Play-Time" grandfather clock radio. TV Guide from the year 1957 that includes June 23 listing or info as to where I can get one. Grebe Syncrophase 7 "B" & "C" or "A" socket power units (original battery eliminators) and Grebe cone extension speaker. Tuning and volume knobs for Zenith trans-oceanic black with gold centers. Band selector knob for Scott Allwave 15. Also, what chassis type is used in a Stewart-Warner "Our World Today" radio that looks like a set of books?
Leonard Arzoomanian
61 Columbus Avenue
North Providence, RI 02911
(401)232-0869

WANTED: General Electric radios models A-55, A-65, A-67, A-75, A-87, A-88, A-125, A-205 any condition. Daniel Gaidosz
342 West River Road
Orange, CT 06477

WANTED: Rigid plug-in extender, 24 pin Tek part no. 013-003400 or 012-066 for Tek Scope 564. Also manual for type 3A1 plug-in for Tek 564. Itsuo Yano
80 Lehua St.
Kahului, HI 96732

FOR SALE: Reprint of early radio catalog! 1922 "Radio Apparatus" catalog of Clark & Mills, with descriptions & prices of radio sets and parts by Westinghouse, Grebe, Federal, Signal, Clap-Eastman, Giblin-Remler, DeForest, Atwater Kent and many others, also magazines & books pocket size 24 p., \$4.50 ppd. Theo D. Robinson
25-A Cedarwood Dr.
Ashville, NC 28803

WANTED: DeForest CR-100 oak coil rack; DeForest SP-2 & SP-4; DeForest SW-100 wavemeter. Have sale list 90-2 ready - SASE
George Potter
2069 Sienna Trail
Lewisville, TX 75067
(214)-315-2553

WANTED: Information and/or characteristics of the Western Electric Transmitting Tube #228-A. This is a champagne bottle shaped tube of the water cooled variety. Approximate date is 1929. Any information on this tube or the equipment in which it was used would be greatly appreciated. Sam W. Wrenn
2314 Seminole Dr. #1207
Arlington, TX 76010
(817) 860-1101

FOR SALE: Radiola 20 good shape
Early RCA parts-state needs,
Magnavox Horn R-3B very good-\$60.,
RCA service manuel Vol.1-\$50, No. 2-
\$20, Rider abridged I-5-\$25, QST's
from 1920, much more!

Robert Husted
270 NW 3rd Court
Boca Raton, FL 33432

WANTED: Am about to celebrate my
100th birthday!!! Yes I still bide my
time working on old radios — Does
anyone have a junker three dial radio
chasis to keep me busy?? Lost my
wife at 89 years. Let me know if any
available.

Hugo Castelli
1406 E. 5th Avenue
Joliet, IL 60433

FOR SALE: Zenith 1946 #6D-2614
wood Consoltone \$42, Stewart
Warner 1946 #9000B \$60, Berkshire
1930s line cord set \$60, Sonara
1940s #LLS179 \$30, Detrola 1946
larger wood set \$30, Eckstein (made
in Minnesota) 1950s #T87 black
bakelite - mounts under cupboards or
shelf \$40, Emerson 1950s #724
forest green plastic clock radio \$65.
SASE (long).

Irene M. Ripley
Box 9374, N.
St. Paul, MN 55109

WANTED: "Supplementary" tube
chart, or copy of, for Knight model KG-
600B tube tester.

Bob Barr
3130 Bellanca St.
Columbus, GA 31909
(404) 322-2180 collect

FOR SALE: Philco 604C-wood art
deco - tubes light, doesn't play, almost
mint \$90. Philco 38-9 (1938) art deco
table model-works but squeals when
a station is tuned in, excellent \$90.
See 'Flick of the Switch' page 125.
Also many other radios, books & tubes.
Send 2 stamps for complete listing
to:

Ron Boucher
P.O. Box 541
Goffstown, NH 03045
(603) 497-2988

FOR SALE: More than 140 vintage
Radios, loudspeakers, Canadian and
USA from 1919 up. 30 years of
accumulation. Also old instruments,
equipments, tubes, magazines. Also
old records collection 78, 45 (Red
Seal), 33 $\frac{1}{3}$. Must sell in **block**. SASE
for list.

Ernest Sisak
97 Eastlawn St. Oshawa
Ont. Canada L1HTJ7
416-728-9074

WANTED: Diagram and/or info on
General Electric model X-340. Will
pay for copies. Philips set serial No.
B4X26A. Not need be in working
condition., even without cabinet.
Information on the experiments
conducted by Dr. Alexander Graham
Bell toward the invention of the
telephone, to include geographical
sites where the experiments were
conducted.

Carlos Martinez
#21 Colonel Trizarry St.
Cayey, PR 00633 USA

FOR SALE: Quality reprints of a 1928
book promoting the canadian
Mercury receiver. 36 pages. Available
from ARCA, or US \$4.50
Bob Murray, 3216 Assiniboine Ave.,
Winnepeg, MB, Canada R3K 0B1.
(204)885-3045

WANTED: Battery radios of the '20's: AMRAD, Atwater Kent, Deforest, Federal, Grebe, Paragon, Tuska, Kennedy, Clapp-Eastham. Richard Sharisky
P.O. Box 521, Belmont, MA 02178
(617) 484-5784

WANTED: Duck and other early catalogs, Murdock 500 driver, clean Radiola III balanced amp, good Radiola III amps transformer w/C.T., complete base for U21325, Music-master horn base cover plate, Real photo postcards of early radio equipment, pair of knobs for Bendix green catalin model 526.

John Pisarski
114 Evans Road, Trooper, PA 19403
(215) 539-0756

FOR SALE: Mint Waverly grand cabinet, all chrome chassis, Scott Allwave 12 with all coils.

Les Rayner
5512 N. 71st Place
Scottsdale, AZ 85253
(602)947-1375

SALE: Fine reprints of those rare early catalogues. Such as Atwater Kent, Tuska, DeForest, RCA, Kennedy, Wireless Specialty, Sears also data on Edison Photographs. Send for latest lists.

Arthur W. Aseltine
345 Glenwood St.
Ann Arbor, MI 48103

WANTED: QST 1916-1927, spark xmitter rotary and xta/ rcvr. Edward J. White WA3BZT
809 Seymour Rd.
Bear, De 19701-1121
302-322-1313

SALE: Atwater Kent breadboards-boards of all sizes, finished or unfinished at reasonable prices. Antique custom woodwork items always considered—no matter what? Any AK components available there for trade on items I may have in stock??

Lawrence DiBarry
212 N. 6th St.
Chambersburg, PA 17201
(717) 263-3804

WANTED: Looking for some of those white porcelain rheostats as shown in Vintage Radio, page 171, bottom right hand corner—Condition? and what you want for it—

Mel Comer
025 Roberts Road
Ardmore, PA 19003
215-642-5329

WANTED: Crude battery sets with Ace Products metal tag made by Precision Equipment Co. Have some nice sets to trade such as Crosley 4-29P, Federal 102, DeForest Unit Panel, etc. Craig Ball, 204 N 5th St., Marshalltown, Iowa 50158

WANTED: Diamond shaped loop antenna, folding or not. Any good brand with or without mount.

Ross Smith
1133 Strong Ave.
Elkhart, IN 46514

WANTED: IF Transformers, about year 1925, All-American Series R-130 Remler 600s, Silver Marshall, Please quote price and condition. Joe Horvath W6GPB
522 Third St.
San Rafael, CA 94901

OLD EQUIPMENT CONTEST

Cincinnati, Ohio

June 13 - 16, 1990

JUDGES: Clyde Trivette, John Caperton, John Haught, Geoffrey Bourne

CLASS I: CRYSTAL OR COHERER RECEIVERS 1906-1927

- | | |
|--------------------------|----------------------------|
| 1- Larry Babcock | French set with headphones |
| 2- Carl Knipfel | Multiphone receiver |
| 3- Peter Palm | 1923 Liberty Jr. |
| Special- Russell Andrews | Martian Big 4 |

CLASS II: REGENERATIVE RECEIVERS

- | | |
|------------------|---------------------|
| 1- Ron Frisbie | Clapp Eastham Hr-Hz |
| 2- Robert Lozier | Kolster-Brandes |
| 3- Clay Seidel | Radiola Grand |

CLASS III: SUPERHETRODYNE RECEIVERS

- | | |
|------------------|-----------------------------|
| 1- Larry Babcock | Radiola Super VIII Portable |
| 2- Harry Bailey | Jesse French Jr. Model G |
| 3- Joe Koester | Philco Model 38-620 |

CLASS IV: RECEIVERS WITH RF AMPLIFIERS

- | | |
|---------------|--------------------------------|
| 1- Ernie Hite | David Grimes Baby Grand Duplex |
|---------------|--------------------------------|

CLASS V: RADIO ADVERTISING

- | | |
|----------------------------|--|
| 1- Ken Frankenberry | Sonatron Literature with amp and tubes |
| 2- Larry Flegle | Silver Marshall signs and literature |
| 3- Larry Wright | Atwater Kent Lamp |
| SPECIAL- Robert Trauterman | 1924 antenna lamp |
| SPECIAL- Gary Schneider | radio games display |

CLASS VI: SPEAKERS (HORN & CONE)

- | | |
|------------------|----------------|
| 1- Perry King | King Amplitone |
| 2- Larry Babcock | Vocarola |

CLASS VII: ALL AMERICAN FIVES

B: Bright Phenolics

- | | |
|-------------------------|-----------------------|
| 1- Bruce Eddy | Philco model 48-230 |
| 2- Jim Rankin | Westinghouse H-126 |
| 3- Perry King | International Kadette |
| SPECIAL- Lloyd McIntyre | RCA Portable |

C: Novelty

- | | |
|--------------|----------------------------------|
| 1- Ed Taylor | Airline Lone Ranger with display |
|--------------|----------------------------------|

CLASS VIII: CINCINNATI MANUFACTURERS OTHER THAN CROSLEY

- | | |
|------------------------|-----------------------------------|
| 1- Charles Stringer | Doron Brothers display |
| 2- Peter Palm | 1923 Cino set |
| 3- Russell Andrews Sr. | Kodel P11 & P12 camera box radios |

CLASS IX: CONSOLES

- | | |
|---------------|------------------------------|
| 1- John Terry | Radiola Super VIII with loop |
|---------------|------------------------------|

CLASS X:

- | | |
|--------------------|--------------------------------------|
| 1- Larry Babcock | 3 volume set Harmsworth encyclopedia |
| 2- Geoffrey Bourne | Five wireless books |
| 3- Ed Taylor | Five wireless books |

CLASS XII: TRANSISTOR RADIOS

- | | |
|-------------------|------------------------------|
| 1- Larry Wright | Tesla radio Czech. |
| 2- Lloyd McIntyre | Regency TR-1 in original box |

CROSLEY CONTEST**CLASS I: BATTERY SETS**

- | | |
|-----------------------|------------|
| 1- Larry Babcock | Harko Sr. |
| 2- John Haught | Crosley 51 |
| 3- Peter Palm | Harko Sr. |
| SPECIAL- Larry Wright | Crosley V |
| SPECIAL- Ross Smith | Crosley XJ |

CLASS II: AC SETS

- | | |
|------------------------|-------------------------------------|
| 1- Ross Smith | Crosley Model 53 |
| 2- Floyd Bennett | Crosley Model 54-G |
| 3- Geoffrey Bourne | Crosley Model 124 Grandfather clock |
| SPECIAL- John Haught | Crosley Model 11-1250 |
| SPECIAL- Don Patterson | Crosley Model 124 in box (Playboy) |
| SPECIAL- Bruce Eddy | Crosley Model 03CB (1943) |

CLASS III: ADVERTISING

- | | |
|--------------------|---------------------------------------|
| 1- Geoffrey Bourne | Crosley Pup with Bonzo and literature |
| 2- Joe Koester | Crosley Dealer Clock |
| 3- Don Patterson | Paper mache Bonzo with lit. and sign |

CLASS IV: TRANSISTOR SETS

- | | |
|------------------|--------------------|
| 1- Larry Wright | Crosley RF6 hybrid |
| 2- Larry Babcock | Crosley RF6 hybrid |

CLASS V: SPEAKERS

- | | |
|---------------------|----------------|
| SPECIAL- Rod Sounik | Crosley type F |
|---------------------|----------------|

CLASS VII: COMPANY HISTORY

- | | |
|------------------|--------------------------------------|
| 1- Don Patterson | Crosley Broadcaster magazines |
| 2- Peter Palm | autographed J. Powel Crosley picture |
| 3- Rod Sounik | WLW programs |

CLASS VIII: ANYTHING CROSLEY

- | | |
|-------------------|----------------------|
| 1- Olgierd Lindan | Xervac hair restorer |
| 2- Steve Baron | Sutter UHF converter |
| 3- Karl Koogle | Crosley auto radio |

COLLECTOR'S BOOKS

Antique Radio Restoration & Price Guide by David & Betty Johnson	\$12.95
Guide To Old Radios, 225 pgs., by David & Betty Johnson	NEW 15.95
Seventy Years of Radio Tubes & Valves By John W. Stockes (SC)	19.95
Radio Enters The Home, 128 pgs. 8½ X 11	12.50
Radio Equipment & Supplies - 168 page reprint	13.95
1927 Radio Encyclopedia - Gernsback, 179 pgs.	11.95
Crosley Radio Catalog, circa 1923, 32 pages	4.50
Westinghouse Apparatus, circa 1920's, 8½ X 11	4.00
Short Wave Radio Manual, Official 1934, 260 pages	14.95
How To Repair Old-Time Radios, 162 illus., 252 pages	11.95
Vintage Radio Handbook, 263 pages, 1000 illus.	11.95
Flick Of The Switch 1930-1950, 312 pgs., 1000 illus.	11.95
Most Often Needed Diagrams 1926-1938, 600 models	11.95
1921-1932 Collector's Guide, 264 pg., 9,000 models	11.95
Atwater Kent Radio Parts Book, 24 pages, Model 9 plus 50 speakers	4.95
ARVIN. . .The First Sixty Years, 263 pgs.	NEW 7.95
Radio for the Millions, a fun book, 192 pages, PB	NEW 8.95
High Power Wireless Equipment, Circa 1910-1911, 99 pages	9.95
Early Wireless by Anthony Constable, HB	15.95
Instructions for Operating Grebe Radios, 64 pages pocket size	4.95
Radiola Super - Hetrodyne 2nd Harmonic	4.95
Atwater Kent Instruction Book Vol. II, an exact color duplication of the original	8.95
How to Build and Operate Short Wave Receivers, 72 pages	7.95
Official Radio Service Manual, 1930 Gernsback, 8½ X 11, 356 pages	19.95
The Story of Nipper and His Master's Voice, 64 pages, illustrated	6.50
The Cat's Whisker, 50 Years of Wireless Design, HB (rediscovered copies)	14.95
Radio Station Treasury 1900-1946 — 8½X11 176 pgs.	12.95
Gernsback's Shortwave Library, 5 books, Vols. 1-5	NEW SET 11.25
Tesla's Experiments, 170 pages, with alternate current	NEW 9.95
Los Angeles Radio Mfg., by Floyd Paul — P.B.	9.95
Radio Speaker Encyclopedia, 8½X11, by Floyd A. Paul	11.90
Fifty Years of Radio, March 1938 issue of Hugo Gernsback's famous publication - 134 pgs. .	14.95
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Vision by Radio! by <i>C. Francis Jenkins</i> , 140 pages	NEW 9.95
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Tesla Coil Secrets, PB	6.95
The Complete Talking Machine, 8½X11, 183 pages	19.95

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